U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMM	/IERC
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control nu	
Application Date Shoot 27 CFD 4.76 Attorney Docket Number 17979-046US1	
Application Data Sheet 37 CFR 1.76 Application Number	
Title of Invention METHODS FOR MANUFACTURING REFLECTIVE OPTICAL ELEMENTS, REFLECTIVE OPTICAL ELEMENTS, EUV-LITHOGRAPHY APPARATUSES AND METHODS FOR OPERATING OPTICAL ELEMENTS, EUV-LITHOGRAPHY APPARATUSES AND METHODS FOR OPERATING OPTICAL ELEMENTS AND FUNCTIONAL ELEMENTS.	
FI FMENTS AND FIIV-I ITHOGRAPHY APPARATUSES METHODS FOR DETERMINING THE PHASE The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or document may be printed and included in a paper filed application.	
Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursual 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)	nt to
Applicant Information:	
Applicant 1	110
Applicant Authority • Inventor Legal Representative under 35 U.S.C. 117 Party of Interest under 35 U.S.C. 1	
Prefix Given Name Middle Name Family Name So	uffi
Marco Wedowski	
Residence Information (Select One) US Residency Non US Residency Active US Military Service	
City Aalen Country Of Residencei DE	
Citizenship under 37 CFR 1.41(b) DE	
Mailing Address of Applicant:	
Address 1 Otto-Schott-Strasse 15	
Address 2	
City Aalen State/Province	
Postal Code 73431 Countryi DE	
Applicant 2	
Applicant Authority • Inventor Legal Representative under 35 U.S.C. 117 Party of Interest under 35 U.S.C. 1	118
Prefix Given Name Middle Name Family Name So	uffi
Frank Scholze	
Residence Information (Select One) US Residency Non US Residency Active US Military Service	
City Aalen Country Of Residencei DE	
Citizenship under 37 CFR 1.41(b) i DE	

Citizenship under 37 CFR 1.41(b) | DE

Mailing Address of Applicant:

Address 1 Rapunzelstrasse 41

City Berlin State/Province

Postal Code 12524 Countryi DE

Applicant 3 Remove

Applicant Authority Inventor Legal Representative under 35 U.S.C. 117 Party of Interest under 35 U.S.C. 118

Prefix Given Name Middle Name Family Name Suffix

Johannes Tuemmler Tuemmler

Peridence Information (Select One) O US Residency O Non-US Residency O Active US Military Senior

Residence Information (Select One) US Residency Non US Residency Active US Military Service

City Berlin Country Of Residencei DE

Address 2

PTO/SB/14 (08-05) Approved for use through 07/31/2006. OMB 0651-0032

	Under the Pap	perwork	Reduction Act of 19	995, no per	sons are rec	quired to	respond t						ralid OMB con	
Annlies	tion Date	n Ch	oot 27 CED	1 76	Attorne	y Doo	ket Nu	ımber	17979-046US1					
Application Data Sheet 37 CFR 1.76			Application Number											
Title of Invention METHODS FOR MANUFAC ELEMENTS, EUV-LITHOGR FI FMENTS AND FIJV-I ITH				APHY AP	PARA	TUSES	AND ME	ETHODS	FOF	R ['] OPERA	TING (OPTICAL	ASF	
Citizensh	ip u nd er 3	37 CF	R 1.41(b) i	DE										
Mailing A	ddress of	Appl	licant:											
Address 1	1		Semmelweisst	rasse 15	a									
Address 2	2													
City	Berlin						State	Provin	ice					
Postal Co	de		12524			Cou	ntryi	DE		-				
			isted - Addit by selecting t			Inform	ation	blocks i	may be			Add		
Corresp	onden	ce I	nformatio	n:										
			lumber or co see 37 CFR 1		the Corr	espoi	ndenc	e Inforn	nation s	ecti	ion belo	w.		
☐ An A	ddress is	being	g provided fo	r the co	orrespoi	ndenc	e In fo	rmation	of this	арр	olication			
Customer	Number		26161											
Email Add	dress										Add Ema	ail	Remove	Email
Applicat	tion Inf	orm	nation:						,			-	-	 -
Title of the	e Inventic	n	ELEMENTS ELEMENTS PHASE SH	METHODS FOR MANUFACTURING REFLECTIVE OPTICAL ELEMENTS, REFLECTIVE OPTICAL ELEMENTS, EUV-LITHOGRAPHY APPARATUSES AND METHODS FOR OPERATING OPTICAL ELEMENTS AND EUV-LITHOGRAPHY APPARATUSES, METHODS FOR DETERMINING THE PHASE SHIFT, METHODS FOR DETERMINING THE LAYER THICKNESS, AND APPARATUSES FOR CARRYING OUT THE METHODS										
Attorney	Docket Nu	ımbe	r 17979-046	US1			Sr	nall Ent	ity Statı	us (Claimed			
Application	on Type		Nonprovisio	onal										
Subject M	latter		Utility											

Representative Information:

Suggested Technology Center (if any)

Total Number of Drawing Sheets (if any)

Suggested Class (if any)

Publication Information:

after filing.

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not been and will not be the subject of an application filed in another country, or under a multilateral agreement, that requires publication at eighteen months

34

Request Early Publication (Fee required at time of Request 37 CFR 1.219)

Sub Class (if any)

Suggested Figure for Publication (if any)

Remove

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under	the Paperwo	rk Reduction Act of 1	995, no persons	are required to re	spond to a collection of	of information	unless it contains a va	lid OMB control number
Application Data Sheet 37 CFR 1.76			2 1 76 A	Attorney Docket Number Application Number		17979-046US1		
			` 1.70 A					
Title of Invention METHODS FOR MANUFACT ELEMENTS, EUV-LITHOGR FI EMENTS AND FLIV-LITHO				Y APPARATI	JSES AND MET	HODS FO	R OPERATING O	PTICAL
Please Select	One:	Custome	r Number	Number		er US Representative (37 CFR 11.9)		
Prefix	Given N	lame	Middle Na	ame	Family Name	•	Suffix	Remove
	Sean		P.		Daley			Kellove
Registration N	Registration Number 40978						-	<u></u>
Prefix	Given N	iven Name Middle		ame	Family Name)	Suffix	Remove
	Chris		C.		Bowley			Kellove

Suffix Prefix Given Name Middle Name Family Name Marc M. Wefers

Registration Number 56842

Registration Number

Additional Representative Information blocks may be generated within this form by selecting the Add button.

Add

Domestic Priority Information:

55016

This section allows for the applicant to claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c). Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a) (4), and need not otherwise be made part of the specification.

Prior Application Status	Pending	Remove				
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)			
This application	a 371 of international	PCT/EP2005/050985	2005-03-04			
Prior Application Status	Expired		Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)			
PCT/EP2005/050985	non provisional of	60550302	2004-03-05			
Additional Demonstic Defends, Data was be a consisted within this form by a deather						

Additional Domestic Priority Data may be generated within this form by selecting the Add button.

Add

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CER 1 55(a)

and 37 Of It 1.33(a).			
		Re	emove
Application Number	Country i	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
10 2004 011 355.6	DE	2004-03-05	Yes No
		Re	emove
Application Number	Country i	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
10 2004 011 356.4	DE	2004-03-05	Yes No
Additional Foreign Priority Add button.	Data may be generated within the	nis form by selecting the	Add

PTO/SB/14 (08-05) Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	17979-046US1
		Application Number	
Title of Invention	ELEMENTS, EUV-LITHOGRA	APHY APPAR <mark>ATU</mark> SES AND ME	ELEMENTS, REFLECTIVE OPTICAL ETHODS FOR OPERATING OPTICAL ETHODS FOR DETERMINING THE PHASE

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.								
Assignee 1 Remove								
If the Assignee is an Org	If the Assignee is an Organization check here.							
Organization Name	Carl Zeiss SMT AG	eiss SMT AG						
Mailing Address Inforn	nation:							
Address 1	Rudolf-Eber-Strasse 2							
Address 2								
City	Oberkochen	State/Province						
Country DE		Postal Code	73447					
Phone Number		Fax Number						
Email Address		•						
Additional Assignee Data may be generated within this form by selecting the Add button.								

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.							
Signature	/Sean Daley/		Date (YYYY-MM-DD)	2006-08-31			
First Name	Sean	Last Name	Daley	Registration Number	40978		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552)
 and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine
 whether the Freedom of Information Act requires disclosure of these records.
- A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an
 individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of
 the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.